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Please amend the ~~first~~ second full paragraph on page ~~30~~ 31 of the specification as follows:

The minimum energy routing of the protocol of the invention is used to setup the optimal path of a call. The following algorithm of the protocol of the present invention is based on this minimum energy routing.

Please amend the abstract of the disclosure of the specification as follows:

An ad-hoc, peer-to-peer radio system includes a series of radio terminals forming a service group, each radio terminal having a transceiver for communicating with terminals in the same service group, computer means, and memory for storing program software. Within the system, a method and protocol for communication among the terminals includes establishing a connection with one radio terminal based on time-division access; initiating an outgoing call from the radio terminal including registering with another radio terminal for serving as a node in the call connection by transmitting a registration request; and initially transmitting said registration request on a last time slot(TS) of a respective time frame (TF), said last time slot serving as a configuration channel.

~~A novel protocol for an ad-hoc, peer-to-peer radio network that provides collision-free channel access with an emphasis on improving geographic reuse of the frequency spectrum. The protocol of the invention is executed on the reservation or control channel, and provides a method for allocating data transactions on the data channels. The system of the invention utilizes multiple parallel data channels 'that are coordinated by a single reservation channel. The transceiver of the system employs two modems' to solve the channel reliability issues with multiple channel designs, where one is dedicated as a receive-only modem for gathering channel usage information on the reservation channel. High quality voice, video and data .may be transmitted. The reservation channel implements a time division multiple access algorithm with dynamic slot allocation. In a distributed manner, nodes determine geographic reuse of slots based on channel quality extracted from the modem. Signal quality calculations are used to determine the likelihood of a slot reuse causing destructive interference within a node's neighborhood. Requests for slot usage are compared with the known traffic pattern and accepted or rejected by nodes within RE signal range based on the signal quality calculations.~~

set (SS). The message shows the utilization map it knows about, and requests to register with the closest AT. In the utilization map, it marks as busy all time slots (TS) during which a message or high-level noise was received during the last time frame, and also marks the time slot where it intends to move to with the next frame. The TS where it wants to move in the next time frame will have been reported as free in utilization maps of all AT's of the SS. In every time frame, the AT creates the utilization map based on time slots it identified as being busy (a signal was received during the TS), and it receives similar maps from all other AT's in the transmit-set of each AT (TxS). Identifying free TS's consists in making a bit-wise OR between all received maps. The result shows free time slots as bits with value zero and busy TS as bits with value one.

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Please amend the second full paragraph on page 21 of the specification as follows:

The group of messages for data transfer planning is used for adjusting the transmit power, building, re-building, re-routing and releasing links, as described hereinbelow in detail. As disclosed in United States Patent Number 6,404,756 ~~copending U.S. Application Serial No. 09/705,588~~, some of them are used before starting the transfer of data packet, and some are used while the data transfer takes place. Data' Channels (DC's) are mainly used for moving data packets from one AT to another. Some of the data transfers require confirmation/rejection of received data, and some not. A rejection of received data is an automatic request for retransmitting the associated data package. Broadcast services do not require any confirmation of received data correctness.

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Please amend the paragraph ~~bridging~~ page 29 ~~and page 30~~ of the specification as follows:

The protocol of the present invention is based on least energy routing determination, as discussed previously especially when transmitting data. The routing table messaging that is exchanged between terminals may have a format as that disclosed in copending, commonly-owned United States Patent Number 6,873,839, issued March 29, 2005, ~~U.S. patent application serial number 09/____, filed on ____ 2001~~, entitled "Prioritized-Routing for an Ad-Hoc, Peer-to-Peer, Mobile Radio Access System which is incorporated by reference herein.

Please amend the paragraph bridging page 19 and page 20 of the specification as follows:

The power level of the modem for the configuration channel (CC) information is greater than that of the modem for transmitting data on the data channels (DC), since an AT must first send out connectivity information with enough power to reach other AT's of its respective service set (SS). Once this has been done, and a routing path determined, which routing path will indicate the first AT that shall constitute the first hop or link of the routing path, which hop is closer to the requesting AT than at least most of all of the other AT's of the SS, the other modem dedicated to the transmission of[[,]] data on the DC's will only have to transmit at a power level less than that of the modem dedicated to the configuration channel. Thus, since applications data (AD) are transmitted at a lower power than that of the configuration data (CD), the condition for collision in data channels can be identified before it occurs, with appropriate measures being taken for preventing it, such as the use of CDMA. In addition, since the data channel data is' transmitted at a lower power level, interference is reduced since the RE waves of the data channels do not propagate as far along the SS. It is noted that in the case where the primary modem is used most of the time for transmitting both configuration data as well as channel data, with the dedicated reservation-channel modem only being used when the primary modem is occupied with sending out messaging on the data channels, the primary modem will have its power level changed in accordance with which channel it is transmitting, as disclosed in United States Patent Number 6,404,756 ~~copending U.S. Application Serial No. 09/705,588~~. However, in the preferred form of the invention, the dedicated configuration-channel modem receives and transmits configuration data regardless of the state of the primary modem.

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Please amend the ~~second~~ first full paragraph on page ~~20~~ 21 of the specification as follows:

When first powered on, or when approaching a group, the new terminal (AT) listens to messages in the time frames (TF), creates a utilization map based thereon, and computes its transmit power, in the manner disclosed in United States Patent Number 6,404,756 ~~copending U.S. Application Serial No. *09/705,588*~~. According to the protocol of the present invention, it submits the first message in the last time slot (TS) of the time frame, using as much power as needed in order to reach all AT's from which it has received similar messaging, that is its service

amount of energy over the complete route. The major reason for this is that at least-energy routing minimizes the radiated RE energy, in order to reduce interference between terminals A consequence of this is that it creates the most efficient use of the power supply of the terminals. Routing tables based on this least energy routing a developed by the system of the invention, and stored at one or more radio terminals, which routing tables are transmitted and stored by other terminals forming part of the link by which a call is connected. An example of such a routing table is disclosed in copending, commonly-owned United States Patent Number 6,873,839, issued March 29, 2005, ~~U.S. patent application serial number 09/ .filed on 2001~~, entitled "Prioritized-Routing for an Ad-Hoc, Peer-to-Peer, Mobile Radio Access System", which is incorporated by reference herein.

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Please amend the ~~last~~ first full paragraph of page ~~8~~ 9 of the specification as follows:

While the protocol method of the present invention is disclosed with regard to an ad-hoc, peer-to-peer radio system, the protocol is equally applicable to any wireless LAN, wireline network, and the like, to which the method and system disclosed in United States Patent Number 6,404,756 ~~copending U.S. application serial no. *09/705,588*~~ may apply.

Please amend the first full paragraph of page 15 of the specification as follows:

The protocol (AP) of the system of the present invention applies to an ad-hoc, peer-to-peer radio network system having coordinating channel access to shared parallel data channels via a separate reservation channel, as disclosed in United States Patent Number 6,404,756 ~~copending U.S. Application Serial No. 09/705,588~~. In the radio network system of the invention, there is no fixed base station; each radio terminal is capable of acting as a mobile base station. The protocol of the present invention provides such an ad-hoc, peer-to-peer radio system with the capability of preventing collisions of data transfer. In high-density populated area (conference halls, stadium, downtown of big cities, etc.), the protocol of the present invention allows each terminal to perform close to its maximum theoretical capacity, while dropping the requests in excess. Such behavior is in contrast with conventional polling-type protocols that cannot provide any service when the number of requested connections is larger than a particular fraction of terminal capacity.